ILLARION YANKIN

NOTES *of a* STAKHANOVITE

FOREIGN LANGUAGES PUBLISHING HOUSE
Moscow

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SKETCHES
OF
SOVIET LIFE

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PUBLISHER'S NOTE

The publishers have supplied this edition with photographs illustrating the life of the author.

I arrived at the Krasnogvardeiskaya copper mine in Krasnouralsk, the Urals, in 1934.

I often recall that first day at the mine. On the face of it there is nothing remarkable about a young man getting a job. But what made the day memorable was the warm welcome the mine gave us newcomers from the collective farms. There were special people to take care of us and they did their best to make us as comfortable as was possible in a modest little mining town.

We had not yet begun work and were not on the pay roll, but we were constantly being told about the amenities we had at our disposal: here was the hot water, here the reading room, here the laundry, and here the tailor shop if we wanted to make use of it.

The dormitory we were put up in was not exactly a mansion, of course, but it was spick and span and cosy. The house managers used to run in off and on to ask whether the place was heated properly. The trade union and Komsomol public inspectors kept them on their toes.

I had heard and read a great deal about the sensations a man experiences on going down into a mine for the first time. Some say: "You feel the dreadful weight of the rock pressing down on you." Others say: "The gloom of the underground depresses you." The first thing that struck me was that it was warm down there.

I had grown up in a village and was used to working in the fields; of large-scale industry I did not have the slightest idea, and of the new construction jobs of the five-year plan, the huge factories and mines, I knew

only from what I had read in the papers. And although I had plenty of work in the Novy Pakhar (New Ploughman) Kolkhoz, which my wife and I had joined in 1928, I was eager to go to work in the Urals when that opportunity was offered. I wanted to do something more exciting.

There was nothing frightening about the mine because they gave us the simplest work to do: I began as a mucker. The miner at the face drilled blast holes with a pneumatic drill, and when the ore had been blasted down, our job was to shovel it into trams. But even the simple physical work I was doing was part of a large-scale production process based on mechanization. The productivity of the latest model drills put out by Soviet plants was very high indeed for the time.

The muckers were the human link between two mechanized processes. The hard copper ore was first drilled and then the blast holes were charged with explosive and the rock blasted to bits at one shot. Our job was to clear the loose ore away from the face fast enough to keep the loaded trams flowing in a steady stream to the hoist.

So far everything depended on the worker being handy and alert.

I'll make a go of it, I said to myself.

I soon got to know the other men in the mine and made some friends. And although for a long time, more than a year in fact, I wasn't promoted, I made up my mind to stay on in the mine. I had already acquired a taste for the work. It was my secret ambition to become a more highly skilled worker, but I didn't want to push myself forward. At last Mikhail Grigorievich Kurzayev, the drillers' crew leader, came over to me one day and said:

"Would you like to work at the face, Illarion? I see you've got the knack. What do you say?"

"I'm willing."

"All right then, listen to me." We sat down together and for the rest of the evening Kurzayev told me what a driller ought to know. He explained how the ore beds lay, what the ore and rock were like, how to handle a drill, what to do in emergencies, and what to be on the lookout for....

"I don't think you've been wasting your time around here all this year," he said as we parted. "If you run up against a snag you can always ask. Start in on the evening shift."

Kurzayev may not have been a professional speaker but he talked so warmly and interestingly about his native Urals, about the great Second Five-Year Plan and about mining that I was soon itching to lay my hands on a drill.

Kurzayev deliberately kept away from the face when I started in drilling. Most likely he believed from the pedagogical point of view that I would feel more sure of myself if left alone. And I for my part was too grateful to him for having risked putting me on the face to let him down. I drilled seven one-and-a-half metre holes in my first shift and everything went smoothly. I already knew what the various drill holes were like and how they were to be placed to break up the rock properly.

Toward the end of the shift Mikhail Grigorievich appeared.

"Seven? Fine."

He examined the set and shook my hand. On his way out he turned back and said:

"Listen boy, I've told them to put you on piecework right away. So you'd better watch out—you've got a quota hanging over you."

That's all right, I said to myself, let it hang! I'll cope with it!

I went home excited and happy. After supper I sat down to write letters: one to the wife telling her to

join me at once, the other to Yakov Merkulov, the kolkhoz chairman, asking him to help her to leave.

The management of the mine also encouraged me to bring my wife over. The section chief said to me:

"I can't expect serious work from a man who has his home and family somewhere else. Once you've decided to be a miner you'd better settle here properly."

Long before my wife arrived I was told that I could expect a separate apartment when my family came.

And so the day came when I walked through the mining town no longer a bachelor day labourer but a real miner, a respectable family man who had come to the Urals to stay.

Around this time I had passed my technical exams and had been promoted to the highest category. I had a trade!

In 1935 I finished what was called courses for masters of socialist labour.

I had had only three years of schooling and I had to study hard to make up for lost time. Courses? I'll take them! A lecture? I'll go to the lecture! Study circle? No objections to that either! Anything else I can sign up for?

"Want to sign up for a current events class?"

"I'm on!"

Dozens of people seemed to be interested solely in persuading young miners to study. The Party Bureau heard the reports of representatives of the technical education department, the mine trade union committee and the school for adults, and urged them to show more initiative. Strict instructions about study programs, schedules and attendance were issued.

Our crew leader at that time was Alexei Boyarskikh. He hadn't much use for young workers. He took any success by a newcomer as a personal affront. Was it envy, or what? He was annoyed by drillers who were



Illarion Yankin and his wife in 1928 when they joined a kolkhoz. That was six years before he decided to become a miner

eager to pick up anything new in the way of technique. Once, when I was still working in Boyarskikh's crew, the shift superintendent, Pavel Osipovich Sokolov—a Communist, an experienced miner and a warmhearted, likeable man—came up to me and said:

"Have you heard how much coal Stakhanov has been turning out?"

"I have," I said.

"Well, and how much do you think you could do if we have everything in perfect shape?"

"Pavel Osipovich, you know yourself, I'm the youngest of the lot...."

He laughed.

"Why, lad," he said, "that's just why I came to you.... Come on, be a sport. If it's hard going we'll help you. The main thing is to keep your head and have confidence in yourself."

And he gave me a sly wink.

Sokolov rarely came to us more than once during the shift. And here I saw him looking in twice and three times. He was keeping an eye on me to see how I was coming along. I drilled practically the whole shift through, taking hardly any time off for auxiliary work. I didn't specially strain myself. Just the same, by the end of the shift I had trebled my quota.

I went up in the cage along with Boyarskikh. He wouldn't speak to me. Looked daggers at me and didn't say a word. For four days after that he didn't greet me when we met. What was wrong with the man?

The behaviour of our crew leader was a broad hint to us young miners not to dare to turn out more than he did. Sometimes out of respect for an older worker we did try to slow up a bit and prepared the face for the crew leader so he could top our own outputs. On such days Boyarskikh would liven up and begin laying it into us:

"Well, greenhorns? You thought you'd beat the old man, eh? Watch him drill the stuff and learn, you snot-noses!"

But the minute anyone chanced to get ahead of him he would start sulking again.

Much later I realized what the trouble was. It had taken the old miners long years to learn their trade. It could not have been otherwise in the old days before the Revolution, when the mines belonged to the capitalists and mining technique was primitive. We, young miners, came to the mines after new machinery and equipment had been installed and new Soviet methods of technical training introduced. The whole atmosphere in the mines now helped the worker to learn the trade faster. What had taken the oldtimers years to learn we picked up in a year or eighteen months. Some of the older miners had a hard time adjusting themselves to these changes.

"Here's the way we look at it," Sokolov said. "The young workers have to be given a boost, and as for folks like Boyarskikh, we'll teach them to appreciate the new methods too. Mark my words, Boyarskikh will drop his nonsense some day and give a good account of himself."

He was right.

Some ten years later I read in the newspapers that Alexei Boyarskikh had been decorated for the successful application of Stakhanov methods. There was nothing remarkable about that. The Stakhanov movement swept the hardened conservatives out of the way and helped the simple "laggers" onto the right path.

Grigori Ivanovich Zateyev was a crew leader of quite a different type. He was an old miner too, but unlike Boyarskikh he was an ardent supporter of anything new and daring. He took pleasure in the success of every young driller. One day he came over to me and said:

"I see you're not getting along with your crew leader. What about coming over to my crew?"

"I don't mind."

"Done, then," said Zateyev. "Now, we'll be 'flying in airplanes' all the time. I've spoken to the chiefs already."

The next shift I was transferred to Zateyev's brigade which nearly always figured in the first column of the output index board marked by an airplane. Boyarskikh's crew mostly plugged along on "horseback" or "by car."

I liked working with Zateyev. Everybody respected our crew leader. And he deserved it: he could beat any technician when it came to drilling, tunneling or blasting. At the same time he was a good organizer, and he always thought in terms of the interests of the state as a whole. People's Commissar Sergo Orjonikidze knew him personally.

Sergo Orjonikidze used to come to our mine and talk to our best crew leaders like old friends. This made a tremendous impression on me. Imagine my pride when I, a young driller, was invited along with Zateyev to a conference of miners conducted by the People's Commissar himself! Orjonikidze wanted our advice about raising ore output. He spoke to us with much feeling.

There were wreckers in our mine at the time who went about their dirty work. They fanned fires underground in the sulphur and pyrites layers and succeeded in causing a major fire which put the mine out of commission for quite a long time.

History will never forgive our enemies this heinous crime against the Soviet people!

I was transferred to a salvage crew and for nearly two years we were fire fighting.

Salvage men work where other miners are not allowed to go. Wearing respirators they make their way to where the air is laden with poisonous gases, to the very heart of the danger areas. With special tools at their disposal their job is to clear away cave-ins and slips.

In the salvage crew I went through special training,

acquiring a new profession, and was made a detachment commander.

"You're getting along famously in our crew," political instructor Speshilov said.

I was very happy to hear this praise, but for all that I did not give up the idea of going back to drilling.

Two years passed and the fire was put out, although there still were levels where it was impossible to work because of the heat. Gradually mining operations got under way and the underground installations were put back into shape. Stopes were cut at the new 169-metre level and a newly-formed drilling crew with myself at its head was sent there to work. Later we went down to the 244-metre level. Even here the aftermath of the fire still made itself felt; the ore was hot and the temperature of the air remained high in spite of the increased ventilation.

The perfidious blows delivered by the enemies had evoked a holy wrath in the workers, and we worked as fiercely as if we had been in the thick of battle.

And for that matter it was a battle we were engaged in, and the workers of our mine, even those who only a short time before had been quite frank about working primarily to make money, felt that they were soldiers in the firing lines and acted accordingly.

This was a period when our life had blossomed out in all its beauty, when the policy of the Bolshevik Party had fully triumphed—the period when the people proudly adopted the Stalin Constitution.

There were eighteen men in my crew. I remember nearly all of them personally—Vasili Kurzayev, Mikhail Lyashkevich, Grigori Borodin, Fyodor Kushtynayev, Alexei Drobyshevsky, and others. Nearly all of them were workers who had come to the mines from the village at the same time as I had. But they were no longer casual newcomers, they were professional miners who loved their

work and who felt at home in the mine. They had settled in Krasnouralsk for good, brought their families over and become regular city folk.

All the men were eager to learn. They had the regular technical study circles and all sorts of courses in technical and general subjects at their service, besides which crew leaders, foremen and technicians begrudged neither time nor effort to teach every novice. Just say the word and every facility for study would be yours!

What a great thing that is!

In a book published in Sverdlovsk, an old Urals miner, P. P. Yermakov, describes how the skilled worker in prerevolutionary Russia sought to keep the secrets of his trade from newcomers and smartly cuffed the ears of the too curious.

"What'd you hit me for, anyway? I wasn't getting in your way, just looking from the distance...."

"I'll teach you to look on ... poking your nose into other people's business!"

But if you were to ask crew leaders Kurzayev or Zateyev what they valued most in the young worker, they would answer:

"The desire to learn. Definitely the desire to learn."

Our whole crew studied every day.

We learned not only in the classroom, but directly on the job. Sometimes after work we stayed on in the mine for a long time discussing the results of the day's work, getting one another's advice, arguing, devising ways and means of extracting more ore with less holes, comparing the different types of drills, timing ourselves, and going along to other workings to see how the work was done there.

A large group of instructors in mining mechanics, geology and mathematics had been assigned to teach us.

When I first came to the mine Sokolov told me: "Remember now, you've got to study. Learning makes a

man ten times stronger. We'll give you all the teachers you need, the rest is up to you. But we won't pay instructors for nothing. So you'd better be serious about it, Yankin!"

I was serious. I got myself textbooks and copybooks and every day after work I sat down to my studies like a schoolboy.

Aksenov, the chief engineer, often asked me how I was getting on.

"Haven't dropped it yet, eh? It's hard for you, I know, but stick it out, lad. . . ."

I stuck it out.

When we began on the 244-metre level my crew came out first. We were "flying" now, turning out one-and-a-half times the monthly quota, or an average of more than 2,000 cubic metres of ore.

It soon became clear to me that there wasn't enough work for eighteen drillers in our stope. Too crowded. I took the matter up with the section superintendent.

"From the standpoint of the interests of the state, comrade chief," I said, "you could take six men away from us and the work would only profit by it."

"How do you make that out?"

"It's quite simple. With so many drillers there's not much elbow room to manoeuvre, there isn't enough face to drill all the 480 minutes of the shift."

"Interesting, interesting. . . . Have to think it over," said the chief.

And although the other crews continued to work the old way for the time being, ours was cut by six men. Not without a big fuss though, because the six men in question didn't want to be released. Kuzmin and Zakharov were the most stubborn of the lot.

"We're not going to any new crew," they declared.

The matter had to be taken to chief engineer Aksenov. He called us all in.

"What's the trouble, comrades?" he said, addressing Kuzmin and Zakharov.

"We want to stay where we are."

"But you can form a new crew. We'll give you the best conditions," Aksenov coaxed them.

"Let others form a new crew...."

I began to feel awkward about the whole business, so I made a suggestion.

"All right," I said. "Suppose I take six men and leave the crew myself. Do you agree to that?"

"Nothing doing, you can't drop us like that...."

Well, after prolonged talks with the chief engineer and the mine manager the drillers finally agreed to fall in with the reorganization, but they were sore at me for a long time for upsetting the quiet routine they had all been accustomed to.

But who wants a quiet life anyway?

In order not to disgrace ourselves, we had undertaken to drill double the former area of face, and we did it too!

Muckers liked working in our stope better than anywhere else.

"This is the stuff!" they exclaimed as they shovelled away the piles of ore we had prepared for them. "Look at the way they turn it out!"

We had plenty of elbow room now!

Formerly, when we were crowded for space, we just let the drills gnaw away lightly at the rock—there was plenty of time. But now we had our drills going like rapid-fire machine guns. There were always new positions to move to.

And what was the result? Although there were only twelve of us instead of eighteen, our muckers were loading one and a half times as much ore as before.

I was invited to attend a meeting of the Party Bureau.

"The comrades here would like to hear how you organized the work. . . ."

I gave a detailed account of how much time was required for each operation, on which operations we had saved the most time, how we had placed the men, and how the work was distributed. They listened with interest.

"Is that all?" someone asked when I had finished.

"That's all."

"You have omitted an important point," one of the Bureau members said. "We want to know what your shift technician and section superintendent are doing to help you. Speak up boldly, the way Party members do, don't make allowances for anyone."

So I had to take the floor again and list the drillers' complaints. That caused a bit of a stir.

"He's right about the air hoses! They hiss a bit too much ... that's true. . . ."

"Yankin's right: the trams are lopsided. . . ."

Things took a different turn altogether. It dawned on me that it was not a simple account of technical methods that was wanted of me but active criticism of shortcomings.

These first Party Bureau meetings to which we non-Party men were invited taught us to approach every aspect of our work from the viewpoint of the interests of the country as a whole and convinced me that if it were not for criticism there would be no Stakhanov movement. Another idea that occurred to me was that anyone who would rather keep quiet than criticize himself and others cared nothing for the interests of the nation.

We soon got used to the new pace and I went to Aksenov again.

"Nikolai Vasilievich, we can let another three men go."

"Are you sure you're not overdoing it?"

"You'll see we'll only benefit by it."

With nine of us left in the crew, we brought the monthly output up to 3,000 cubic metres. The secret was simple: a broad front to work on and efficient preparations to clear the decks for action.

Our earnings were quite decent too: the crew leader was making two and a half thousand, the drillers, an average of two thousand apiece.

* * *

At the end of September 1940 I was preparing to take a vacation. My wife and I had decided to take the family and go for a trip home to the village. We hadn't seen the folks for years. All our things were packed and our tickets were ordered. All of a sudden a man from the mine turned up at my apartment.

"Yankin, the chief engineer wants to see you at once! I've got the cart waiting outside. Let's go!"

I went into Aksenov's office feeling rather worried. I couldn't imagine what had happened. But Aksenov was all smiles.

"How would you like to undertake a scientific mission for the mine, Yankin? You could take your vacation later on."

"What did you say? A scientific mission?"

"Yes. Why are you so surprised? The Stakhanov method, man, is a contribution to science.... Remember what Joseph Vissarionovich Stalin said about men from the people—the bold men of science?" Aksenov said with feeling.

He took a newspaper clipping out of a folder and handed it to me.

"Here, read this."

"I've read it and I heard it over the radio too."

It was about Alexei Semivolos' records in Krivoi Rog and his first achievements in multi-face drilling. Semivolos had drilled 18 faces in one shift and fulfilled his quota by 1,200 per cent.

"Well, what do you think of it?"

"It's very interesting," I said. "But I'd have to see how it's done."

I had already heard a lot about Semivolos and had been wondering myself whether I couldn't go to the Ilyich mine and see how he did it. So the chief engineer's suggestion fitted in very well. It was worth putting off a vacation for that.

"I'd like to have a look, Comrade Aksenov!"

"That's what we're sending you for. We sat here racking our brains trying to figure out whom to send and finally decided to upset your vacation plans a bit so that you could get a good idea of Semivolos' methods and bring them back here to the Urals. It's quite a job, Yankin!"

I went home and broke the news to the wife.

"They want to bust up our vacation. What do you think, should I turn down the idea?"

The wife looked at me in surprise.

"Don't be silly," she said. "Never mind the vacation."

A few days later I was in Krivoi Rog looking for the famous Ilyich mine. Where was that man Semivolos? How would he receive me? You never could tell what sort of a fellow he might turn out to be....

Finally I found the mine. I made inquiries about Semivolos. As I expected, everyone knew him well.

"Semivolos.... Alexei? He's down the mine, but he ought to be coming up any minute. Where are you from?"

"The Urals."

"The Urals, eh? A relative of his?"

"In a way."

I waited in the office. In a few minutes someone tugged my sleeve.

"That's him. Semivolos."

I saw a short, squat miner, his face and hands all stained copper-red. That's the "hall mark" of iron ore.

I went over and introduced myself. I told him I had come to Krivoi Rog to learn from him.

"Glad to meet you. Excuse my dirty hands," Semivolos smiled shyly. "You work in copper, don't you? It doesn't muck you up like this, does it?"

"Our dust is yellow. . . ."

"Well, I'm going to wash up and then we can have a talk. Sit down, Comrade Yankin. I won't be a minute."



Alexei Semivolos, a former miner who now is chief of the Ilyich Mine Administration, demonstrates the multi-face drilling method to his pupil, driller I. Kutsakovsky



Alexei Semivolos, chief of the Ilyich Mine Administration and Stalin Prize winner, in his office

Semivolos came back from the shower room and we went up to the mine chief's office.

Both the chief and Semivolos took a serious interest in my plans. Semivolos was frankly pleased.

"That's fine," he said when I told him I hadn't come to stand by and watch but intended to work, and work hard, beside him so as to learn something on the job.

"You might teach me something too!" he added with a smile.

"You never know," the mine chief put in. "Those Urals chaps are a horny-handed lot."

A day later I was with Semivolos in the mine, working as a member of his crew. We had agreed to take turns drilling.

I soon discovered that iron ore was far softer than our Urals copper, and easy to drill. Work in the mine was well organized. The machinery worked smoothly. The driller was relieved of all superfluous work. Semivolos, as a rule, was able to drill all the 480 minutes of his shift.

From time to time Alexei turned the drill over to me.

"Go ahead."

When the din died down he would ask:

"Well, how is it?"

That first day the two of us did several quotas each. As we were riding up in the cage Alexei said to me:

"I had heard about you before you came here and now I see that the Urals miners can handle a drill no worse than we Ukrainians."

I went down the mine every day and worked a full shift, fulfilling my quota by 600-700 per cent. While I was there Semivolos set a number of records. One day he drilled as many as 25 faces.

Alexei worked like a titan. He handled his drill with remarkable skill and agility. He had a good knowledge of mining and mining machinery and he worked with great intensity, although at first glance he seemed to tackle the ore with ease. When he finished with one face he would move at once to the next and, exchanging no more than two or three words with his helper or the mechanic, he would set to work. He was especially thorough in his preparations for records. After all, he had to prepare himself psychologically as well as physically.

As for myself, I had not thought about making records, although Semivolos was all for it. Finally I agreed, since I had already fully mastered the multi-face drilling method. I notified Aksenov by wire. Nevertheless I hesitated. What if I were to beat Alexei and in his own mine too! It would be awkward. A wire from Aksenov settled the matter. "Return at once to Krasnouralsk," it said.

"Too bad you're going so soon, Illarion," Semivolos

said regretfully. "We've got used to you here. Maybe you'll stay?"

It really did seem as if the miners in the Ilych mine had got used to me. Semivolos had introduced me to many of the workers, the executives and the directors. I was rather surprised to find myself so popular.

In the beginning of November I said good-by to Semivolos, his wife, and his sweet little daughters, with whom I had made friends, and left for the Urals.

As for the record, I established it in my own Krasnogvardeiskaya mine on November 13.

I had the pleasantest memories of my trip to Krivoi Rog. It showed me how much the state prizes the least notable achievement on the part of a rank-and-file workingman and how vast are the opportunities in our country for creative endeavour, for study, for Stakhanov records, for initiative.

* * *

On the way home I had to stop off in Moscow to pay a visit to the People's Commissariat of the Non-Ferrous Metals Industry. They were holding a conference of heads of departments, leading engineers and some representatives from the localities and they asked me to tell them about the results of my visit to Krivoi Rog. It was not easy for me to speak. I'm not good at making speeches. And at this conference I was more tongue-tied than ever. But I didn't want to disgrace myself before the Moscow specialists, so I spoke slowly, carefully choosing my words. I told them everything, put my plans before them, and then sat down to listen to the remarks and advice from the engineers.

It was quite clear that Semivolos' method ought to give first-class results in the Urals. It was also clear that we in the Urals would be able to add something to that method.

"Exactly what are we going to add?" Aksenov was anx-

ious to know when I reported all the details of my trip to him on my return home. "Come on, man, let's hear."

"You see, Nikolai Vasilievich, it's this way," I began. "Semivolos working on Krivoi Rog ore has been able to boost productivity tremendously by merely letting others take care of the minor auxiliary operations. He drills face after face all through the shift without interruption. In our mines you couldn't do it that way. Our ore is much harder. With a single drill you couldn't handle more than one face a shift. So here's what I suggest: suppose we try using more than one drill at a time— say, two, for a start. You know that I used to turn out 200 and more per cent of the quota. And I wasn't at it every minute of the time either—there were all the auxiliary operations to take care of at which I spent half of my time. You'll see that if I'll do nothing but drill, as the new method calls for, I'll double my productivity—bring it up to 400-500 per cent. Besides, as you know, Semivolos works with a hand drill, and we use telescope feed drills, TP-2's, which work automatically in vertical drilling. In other words, if I start two drills at the first face and have another two ready at the second and as many at the third, I could take care of the lot. All I need is two pairs of drills. The minute I finish drilling the first face, I move to the second, where the two other stopers have been set up, and in the meantime, the two I started with can be shifted to the third face by others. Then the drills from the second face can be shifted to the fourth, etc. I can do at least 800-900 per cent of the quota that way. What do you say, Nikolai Vasilievich?"

Aksenov thought it over.

"Very good. We'll try it out after the holidays."

I got as attentive a hearing from section superintendent Lev Novikov, one of the most daring and enterprising chiefs in the mine. He had started working in the mine while still a student at the technical school. Young and full of life, he always pounced eagerly on a new idea

wherever it came from and he wouldn't rest or let anyone else rest until he had tried it out.

"Sound, very sound indeed!" he said enthusiastically. "Get on with it, Yankin. We'll give you everything you need."

I reported on my trip to Krivoi Rog at various meetings and conferences. And I felt that the knowledge Semivolos had given me belonged not only to myself but to the whole collective of the mine, to all these eager and curious people who listened with such interest to what I had to say and asked so many intelligent questions.

Aksenov and Novikov drew up a regular program for popularizing the new method.

Immediately after the holidays we began working in the new way. This is how the new industrial term "multi-drill method" came into use.

Of course, it would be absurd to think that this method came into being because of a vision that had come to Yankin during sleepless nights. Nothing of the kind. The multi-drill method was the Stakhanovites' response to the mechanization of the ore-mining industry undertaken by the Government on a tremendous scale. Engineering achievements as such, the very situation created by them, had paved the way for this new method and made its widespread introduction possible.

Drill TP-2 which I used copes with ore of any hardness. It is designed for vertical drilling and operates automatically. Without this technical achievement, there would be no multi-drill method.

This was the autumn of 1940. Five years before, J. V. Stalin had made his famous speech at a conference of Stakhanovites in which the leader of the people had prophesied a great future for the innovators' movement. Never shall I forget Stalin's words:

"Only a movement that is absolutely ripe, and is awaiting just a jolt in order to burst free—only such a move-

ment can spread with such rapidity and grow like a rolling snowball."

We thought of Stalin, who had rallied the army of millions of Stakhanovites under the banner of the Party, as we went down the mine on those memorable days full of a deep faith in the mighty revolutionary force of Stakhanovite ingenuity.

Extensive preparations were made at the workings so as to get the new method started quickly and in as fine a style as possible. The inclines were cleared of ore, drilling floors put into proper shape, sets of drills and bits got into readiness, the stope wired for electric lights, the layout of the bore holes mapped out and the depth of each decided on depending on the way the ore lay, and the stopers brought in.

All this preparatory work required two days in the course of which we kept on mining ore according to the old method and in the previous quantities.

On November 11, I drilled one and a half faces with two drills, on the 12th, two, and on the 13th I undertook to set my first record. After drilling one face with two drills, I passed on to the second face, then to the third and fourth. I drilled four faces in one shift using three drills. I manoeuvred with the machines in the way I had suggested to Aksenov: the drills were shifted from the first face to the third, and then from the second to the fourth. All auxiliary operations were carried out by helpers. I fulfilled the quota by 894 per cent in that shift.

The following day we were invited to the City Committee of the Party. Mukhin, the Secretary of the City Committee, told the members of the Bureau what the drillers had achieved. We were asked a great many questions; what seemed to interest the Bureau most was whether it was possible to introduce the new method throughout the mine.

"Let us put it down in the record," Mukhin moved. "This meeting resolves that the Semivolos-Yankin method be introduced not only in all the stopes of the Krasnogvardeiskaya mine but in other mines as well."

The City Committee people drew up a plan for a campaign for the introduction of the multi-drill method on a mass scale.

It turned out that Sverdlovsk and Moscow too had been carefully following all our preparations and our first success brought immediate comments from all over.

The People's Commissariat of the Non-Ferrous Metals Industry wired:

"Received report of your quota fulfilment by 894 per cent on November 13 using three TP-2 drills at four faces. Welcome your new venture, also Stakhanov work of chief of Section Six Novikov, mechanic Yusupov and chief engineer Aksenov who gave you necessary help in organizing drilling by the Semivolos method. Wish you continued success. Hundreds and thousands of copper miners in the Urals and Kazakhstan will follow your example."

On November 14 we did not work, and on the 15th my opposite number on the other shift gave "a simultaneous exhibition." Using two, and partly three drills, he drilled four and a half faces, fulfilling his quota by 935 per cent. The same day, working in the next shift, I topped his mark with 1,150 per cent.

Another telegram came from Moscow.

"Acknowledge receipt of report that on November 15 you fulfilled your quota by 1,150 per cent driving headings in Stope Five, thereby improving on your own record," read the telegram. "...Multi-face drilling opens a new page in the Stakhanov movement in the non-ferrous metals industry.... You have marked the historical days of the fifth anniversary of the speech delivered by the leader of the peoples, Comrade Stalin, at the First All-Union Conference of Stakhanovites, with outstanding labour ex-

ploits. For your exemplary socialist attitude to labour and high standard of work in drilling hard ore I award you the For Excellence in Socialist Competition Badge and a gold watch. Consolidate and multiply your successes, transmit your experience to your comrades in the mines. Your achievements are a valuable contribution to the defence of our great country."

The mention in the telegram of our country's defence reminded us miners that we must hurry. The country was already keenly conscious of the danger threatening it. There was no time to lose! Especially for us of the Urals, who were manning a great arsenal. And if our country instantly responded to our successes with warm words of approval and encouragement, it was our duty to push on militantly to further successes.

Three days after my second record I received a summons:

"You will go to Tagil, to the Third International Mine, to demonstrate your method on the spot."

"I am ready."

"You will leave at once."

"Good."

I found the situation in Tagil none too encouraging. Some of the engineers and technicians there were strongly opposed to introducing new methods on the grounds that in their mine it was out of the question, although their mine was no different from any other. And so I was sent there with instructions to "strike a blow" at the conservatives, to demonstrate the method practised at the Krasnogvardeiskaya mine and to convince the miners of the advantages of multiple drilling. Well, that's just the sort of job I like!

To show up the doubters, five or six times the quota in one shift would have been enough, but I managed to turn out 1,358 per cent.

The local Stakhanovite drillers came to the face where

I was working to try out the new method. They did a fine job. Later on they got some excellent results, but not until they had forced the management to help them by preparing the workings properly. That was actually the main obstacle, and none of those geological conditions.

"You've got to be firmer in your demands," was my advice to my Tagil comrades. "It's up to the mine management to keep up with the Stakhanovite pace and you must make them do it."

Before long multiple drilling had been introduced all over the Tagil mine. And not only in Tagil.

The hammering of our Krasnouralsk drills was echoed in many other mines in the Urals, Kazakhstan, the Caucasus and the Far East.

In Krasnouralsk there was news awaiting me. At the Novo-Levinsk mine multiple-driller Ivan Naimushin had turned out 1,218 per cent of his norm. In Kirovgrad this was followed up by Ivan Koryukov registering 1,230 per cent. A few days after that, miner Avstrakov at the Belorechensk mine topped this showing, turning out 18 times his quota. In Neviansk Fyodor Bobov reached 1,450 per cent, and in our mine Khudzya Gumarov showed an output of more than 13 times his quota.

The next day I made a new record that topped all previous highs—1,935 per cent of plan. This record held for less than five days, however. The first to beat it was Karabash. There, at the Pervomaiskaya mine, driller Grigori Medvedev registered 2,370 per cent. Yarulla Valeyev at the Degtyarka mine achieved a showing of 2,161 per cent, and Ivan Lychagin at the Novo-Levinsk mine, 2,397 per cent.

And so it went on and on....

The names of Avstrakov, Larshin and Basov from the Novo-Levinsk mine, Yudin from Karabash, Mitrakov from the Turinsk mines, Bobov and Khaidin from Kazakhstan and dozens of other Stakhanovites who were quick to take

up the multi-drill method and achieved signal successes by it, grew famous.

Letters and telegrams came pouring in from miners all over the country. Everyone was interested in the new method. Altai drillers asked me to write them a letter giving all the details. Driller Kuzmin from the Nikitov mines offered to correspond with me regularly. Tunnellers working on the Nevinnomyssk canal asked for detailed information about my records....

Then the delegations started coming. Every day after work I had to receive visitors and submit to a long and exhaustive "cross-examination." The visitors inspected the workings, consulted with engineers, made sketches and notes of the "evidence," and sat for a long while in my flat asking more questions.

...There was a knock at the door.

"Good evening. Kurochkin's my name. I know you already from the newspapers. I'm from Kazakhstan. I want to work in your crew for a while. Our Stakhanovites sent me."

Kurochkin, a smart, hardworking miner, stayed with me for two weeks. He went down the mine with me every day, ran the drill, made a great many notes, and attended technical conferences. Later on when he returned to Kazakhstan he sent me copies of a local newspaper with write-ups of his achievements on the job.

I made many friends in that way. Bobov came and so did Medvedev, Yudin, Naimushin, Valeyev....

Our engineers, Novikov and Aksenov in the first place, were working very hard these days. Besides technical management, it was their responsibility to see to it that the new pace was kept up. And it was not so easy to get all the extra equipment needed.

Apart from everything else, Aksenov and Novikov had to work out the scientific generalizations that became necessary with the introduction of the new method.

They went about it boldly and with determination. At one of our technical conferences the issue was put thus: now that the multi-drill method has been devised, couldn't it be applied in all the stopes in which there is room for several drills to work simultaneously, and in general couldn't the faces be extended enough to enable five or six drills to work at once in each? Wouldn't it be advisable to go over to chamber or longwall mining everywhere since our ore was so hard as to make special timbering unnecessary in many cases?

The conference supplied an affirmative answer to these questions. To the credit of our engineers it must be said that the reorganization was effected quickly.

What did all this yield?

The Krasnouralsk Copper Mining Trust, which had not fulfilled its plan during the first nine months of 1940, showed an unprecedented output in the fourth quarter and further improved its performance in the beginning of 1941.

In other words, we did not blindly copy Semivolos' multi-face method, but applied it creatively. Wherever wide stopes had been developed, whole batteries of drills went into action—at first two, then three, four, five, six, seven, eight!

"We've done it!" Aksenov would rub his hands. "You're as good as those fellows who operate several lathes at once!"

"Yes, but they don't move their lathes around from place to place. We're more like mobile artillery!"

"True enough!"

* * *

Our mine became a sort of experimental laboratory.

Evidently that was the reason why Krasnouralsk had the honour to be chosen as the meeting place for an all-

Union conference of Stakhanovites and executives of non-ferrous metal mines.

Noted miners from all over the country—the Urals, the Caucasus, Siberia, the Ukraine, the Far East, Kazakhstan—met in Krasnouralsk.

"Just think of it! An all-Union congress in our little town!" Krasnouralsk oldtimers exclaimed proudly. "Isn't that great! Good for us!"

The streets of our town had never been so lively.

Before the conference opened all the delegates wanted to have a look at our mine and to see how we drilled and blasted, how the ore was hauled from the face and raised to the surface, how the drills were kept in condition and how the pumps operated. The guests were interested in everything: how much pobedite, explosive and fuse we used, how many minutes the driller spent on the actual drilling, how much on moving from face to face, on setting the drills, on talking to his helpers. I demonstrated to them the timing of a single shift, showing that 92 per cent of the working time went on actual drilling.

All that I had already related and demonstrated to the innumerable visitors I went over again—but more coherently—in my report at the conference.

Again the questions came pelting:

"How much pobedite do you use?"

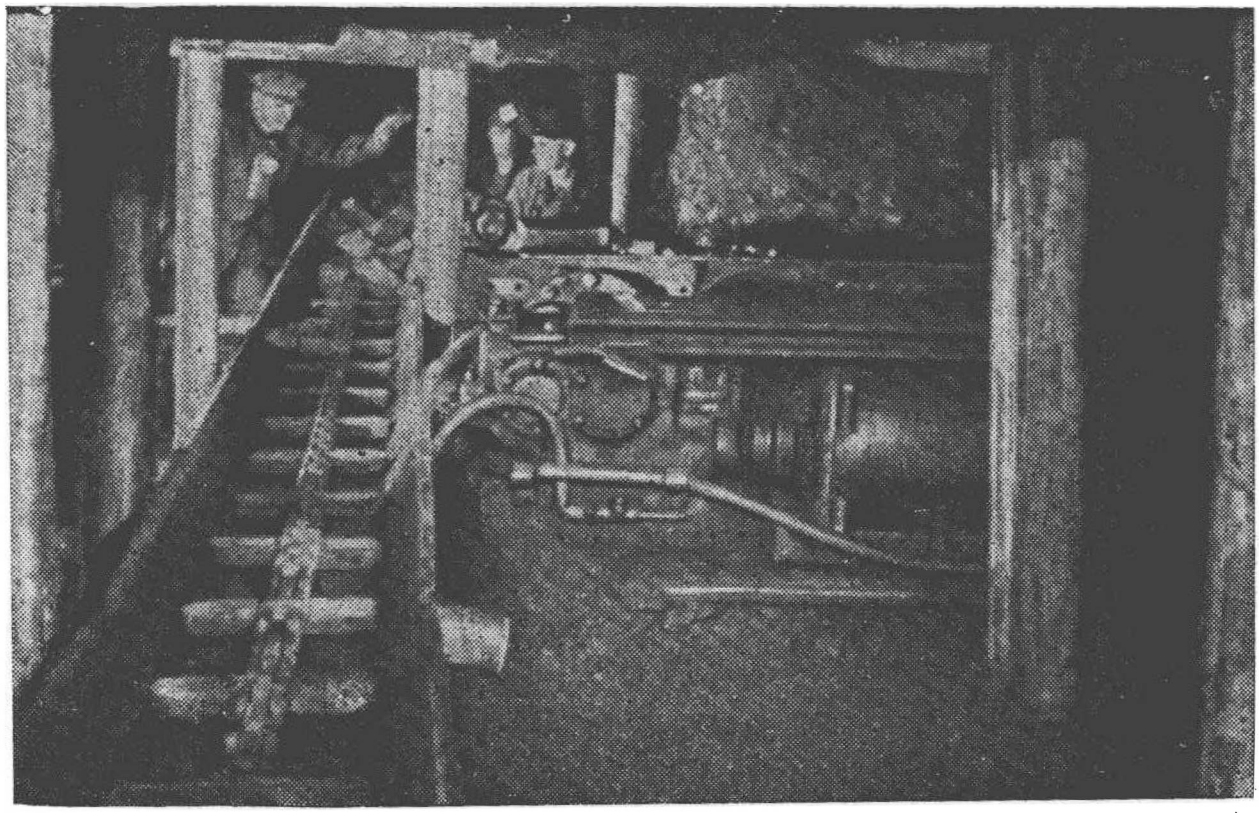
"How deep do you bore your holes?"

"How many muckers have you?"

"What load does your hoist carry?"

"Do you have a preparatory shift?"

True, besides questions there was some useful criticism. Miners from all parts of the country had come to the Krasnogvardeiskaya mine not only to learn from us, but also to share their own experience with us. We were all both pupils and teachers and that was perhaps the most remarkable thing about that conference. The guests pointed out our mistakes and shortcomings without fear of



A mining combine in operation at Stalino Collieries Pit No. 29

offending their hosts. We honestly wished to learn from one another.

I wound up my report with the following words:

"The multi-face and multi-drill method is spreading rapidly, increasing the output of ore and the production of non-ferrous metals. And this is just what we need with war going on at our frontiers; at a time like this we must be ready for any sort of surprise and must strengthen our country's defence more than ever before."

It was now quite clear to me that Nikolai Vasilievich Aksenov had been right when he called my trip to Semivolos a scientific mission.

At the conference in the People's Commissariat in Moscow, as well as during the numerous meetings and talks with the delegations who came to Krasnouralsk to study the new method, I felt that the combined experience of the Stakhanovites was acquiring a scientific value. That is how our engineers regarded it. Sometimes

the engineers consulted the workers. Directors of trusts, leading mining executives, took lessons from us Stakhanovites. And it seemed that all of us—drillers, technicians and engineers—formed a single huge Stakhanovite crew engaged in working out new production methods, skills, rules and quotas. And that is how it was.

* * *

The miners' achievements were described in detail in the newspapers. Our names appeared in the press. It was very pleasant, of course, but at the same time it was a terrific responsibility. In for a penny, in for a pound, as the saying goes. No good making one or two sensational records and then bowing yourself off the stage amid loud applause. You've got to keep it up, to go on working and studying.

The 18th Party Conference was approaching. Industry was among the questions on its agenda. The whole working class was mustering its strength.

My fellow drillers were picking up speed. Grigori Medvedev set a record by turning out forty times his quota. I followed with 4,753 per cent, operating eight stopers. Ivan Yudin from Karabash beat us with 5,460 per cent of his quota.

The whole country rang with the fame of the multi-stoper drillers.

There's no greater joy for an ordinary Soviet man than to feel the warm approval of his people! How can your voice help trembling when you, an unknown miner yesterday, are called upon to speak to millions from the Moscow radio station....

"At our microphone tonight is the Urals miner Illarion Yankin. He will tell you about his multi-drill method."

I began my radio talk by greeting the 18th Party Conference on behalf of the Urals miners and reporting

that in one and a half months of 1941 I had completed my six months' program. Then I went on:

"Our mine has won first place among copper mines in the Soviet Union. But we can do better yet. Our technical possibilities have not yet been fully utilized. We want to drill better and faster!"

Life faced us with new demands: it was necessary to raise the productivity of labour of all the miners, instead of confining ourselves to individual records.

What is a record and what is its purpose?

A record is the mustering of all one's strength for a leap forward, on a section prepared for it it is a supreme concentration of energy and will of a Stakhanovite, who has fully mastered technique. Records are not made every day and not everybody makes them. To imagine that a driller can turn out 4,000 per cent of his quota day after day is like expecting a pilot to make a flight to the stratosphere every day.

Anyone who has watched the breakers come in must have noticed the way a big wave will break a long way up the shore while those behind it will ripple weakly without the strength to reach the big one's mark. And then a new and stronger wave comes along and carries the weaker waves forward beyond the first mark. It's the same thing with a record.

Our industrial executives knew how to "prepare for a record," although not all of them were equally successful. To get the entire mine, all the crews, to follow suit was an entirely different matter.

Day after day miners kept coming to the chief engineer of the mine and declaring:

"We want you to make it possible for us too to go over to multi-face drilling!"

"Put us too on the new method!"

There were also people who weren't above sneering at the innovators.

"Oh, we know all about these records," they would say.

Aksenov, section superintendent Novikov and shift technician Mikhail Smirnov worked days and nights on end but were unable to introduce the new pace throughout the mine. There simply weren't enough materials and tools to go around.

"What's the trouble, Nikolai Vasilievich?" I asked Aksenov. "Really, what is the hitch? What are the people in the central administration thinking of?"

Aksenov smiled wrily.

"They haven't regeared yet. Now look at this: they give us half the quantity of pobedite we need and to Kirovgrad they send twice as much as is required. Stupid bungling!"

I was aware that we would only discredit the new method if we did not eliminate the obstacles preventing its introduction on a wide scale.

I have kept some interesting telegrams. Here is one of them addressed to the manager of the trust:

"By order of the People's Commissar 20 kilograms of pobedite have been sent to your address for Stakhanovite Yankin.... Deliver to addressee." Here is another, addressed to me personally:

"Sending 20 kilograms of pobedite by mail to your address on 26th."

That was all very well, of course. But what did it mean? While one worker was getting packages from Moscow to help him establish records, dozens of others, the very same workers who were being urged to adopt the new method, were being forced to stand idle because they had no pobedite. And pobedite was not the only item in short supply at the mine at that period. There was a shortage of drills, hose and many other

things. And the shortage was due to the fact that the people in charge had not procured the stuff in good time, had failed to do the necessary paper work, or some such other detail.

Some industrial executives, our own as well as those in Moscow, would do anything for the individual pace setters but showed little concern for the rest of the miners.

But, my dear executives, we won't get very far that way!

Just because I had received a parcel all to myself I felt it my duty to rebel against this sort of mismanagement. There was a *Pravda* correspondent visiting our mine at the time and I had a frank talk with him on the subject.

"You write about it yourself, Yankin," he urged me. "It's important to expose the unwieldiness of the management. Go ahead and write. The People's Commissariat will draw its own deductions."

I decided to write a sharp article to *Pravda*. I asked my comrades' advice:

"What do you think?"

One said: "Write!"

Another, on the contrary, said: "Better not. Why spoil relations? After all, look at the help you're getting."

But in the meantime the correspondent had informed his office that such and such an article had been written but that the author was afraid to hand it in. The same evening I got a phone call from the *Pravda*.

"You must realize that this is a matter of state importance. Personal considerations must be dismissed. You say some people will take offence? Never mind, only good can come of it."

That is how the article entitled "New Undertaking Must Have Strong Support" came to be published in *Pravda*. It really did do a great deal of good. The People's Commissar took the necessary measures.

I happened to drop into the office just after the issue of *Pravda* with the article had come in.

"Well, Yankin certainly got it from the People's Commissar this time!" I heard someone say.

"Why, what's up?"

The others laughed. It turned out that the same post had brought an order from the People's Commissar announcing awards to outstanding workers in non-ferrous metallurgy. The order was dated the same day as the newspaper. My name figured on the list of a hundred awardees. The prize was an M-1 automobile.

"You see, the People's Commissar didn't take offence at your criticism, after all!" the comrades laughed.

We were working at high tension. Emulation among the multi-stoper drillers was spreading by leaps and bounds. But the deeper we delved into the details of mining engineering the more keenly we felt our lack of knowledge, the big gaps in our education. Study was the only solution. And hard though it was, we had to apply ourselves to our books in real earnest, myself especially, for I had even less schooling than the others. I had a strict schedule of two hours' study every day. Sometimes even my instructors would telephone and suggest putting off the lesson.

"You must be all in."

But I wouldn't hear of it.

At times you could hardly keep your eyes open for weariness. So you'd go to the sink and sprinkle cold water on your face and return to your books.

"What was the homework in algebra for today? In mining mechanics? Very well. Let's begin. . . ."

I had to read a lot. Even in our narrow speciality a great deal of literature had appeared. In fact, there was so much reading matter to go through that it had been necessary to compile a special booklet—I have it here before me, published in Moscow in 1941 and

entitled *What to Read on Multi-Face and Multi-Stoper Drilling.*

It is wonderful how every new undertaking is seized on and popularized in our country!

I carried on a lively correspondence with friends. One day I got a letter from political instructor Speshilov, with whom I had worked during the fire but had lost touch with since.

"Greetings, Comrade Yankin," he wrote. "I and my wife and daughter send you our fervent Bolshevik greetings and wish you every success in your work. I read your item in *Pravda* of April 29, 1941, entitled 'There Are Hundreds of Us, But There Should Be Thousands,' and I am very pleased that you have such tremendous achievements to your credit in the mining industry....

"I was glad to pick up the paper and find out that a one-time member of my detachment ranked among the foremost people of our great country. Please give my very best regards to the other miners. Write me about your family and how you are getting along...."

The letter was signed "A. A. Speshilov, formerly political instructor, now director of the Cherdynsk Machine and Tractor Station."

...And then one hot summer's day, while I was taking advantage of a brief rest interval to write a letter to the magazine *Stakhanovets*, which had asked for a "thorough analysis" of my work method, there came a knock at the door. It was a telegram from the central administration congratulating me on the fulfilment of my annual output plan.

Another knock at the door.... What was that?

"War!"

* * *

A tremendous meeting of miners. A sea of heads. Mukhin, Secretary of the City Committee of the Party, removes his cap and climbs onto the platform.

"Comrades of the Urals! Comrades miners! Our Homeland is locked in mortal combat with fascism in a Patriotic War fought over a colossal front. The Soviet people are heroically fighting for the freedom, life and honour of the country. The great Stalin inspires us to accomplish feats of courage and heroism, to fight on to victory!

"Miners, the City Committee of the Communist Party of Bolsheviks calls upon each one of you to work like fighting men, like Stakhanovites, like true Soviet workers, like Bolsheviks, like Stalinists!"

I take the floor and tell my comrades that the country expects us to make a supreme effort, to work like titans, that we are all fighters on a single front, that we will not besmirch our honour, that we will give a good account of ourselves.

Mukhin called me aside.

"Now, Yankin, here's where you can show your mettle. We expect big things of you. Our copper will go to make shells, you know!"

"I know, Comrade Mukhin."

"Drop in to the City Committee whenever you have time."

The drills hammered away in the stope.

"Go to it, Vasili Terentievich!" I said to Kurzayev. "These drills of ours are machine guns now. Stick fast to your position!"

"Come on, Illarion, let's pledge no less than four quotas a shift."

And we drilled no less than four quotas a shift.

There were fifteen stopes in our section of the mine, and eight drillers all told. A year before there had been sixty drillers working on a similar section, and that was after we had cut down the number by nine and consid-

ered it quite an achievement. And now there were eight!

Seven of the fifteen stopes were assigned to me, the other eight to Khudzya Gumarov, Nikolai Dvornikov, Stepan Antonov, Nikolai Smolin, Filipp Vesyolykh and Vasili Kurzayev.

Boris Mullin, a mechanic, and Olga Golovina, a helper, were assigned to me. The other drillers had four helpers and four mechanics between them.

Suleiman Yusupov, the earnest, tireless section mechanic who had charge of all the pneumatic tools, air lines and scraper winches, warned Boris Mullin sternly about the responsibility of his job:

"Now, Boris, this is a powerful outfit you've got to take care of. It's your business to see that every screw is in place. If you don't, I'll send you to work on the surface."

Our seven stopes turned out three-fourths of all the ore mined in the section. The batteries of drilling machines were in operation all the time. Olga Golovina barely had time to change the bits.

"Well, have you made your four quotas?" Vasili Kurzayev would ask.

"No, brother, I haven't."

"Go on! How many have you done then?"

"Seven and a half!"

The shift superintendent, Mikhail Smirnov, a pupil of Aksenov and as excitable and restless as his teacher, would come along at the end of the month with his accounts.

"Now let's see how much you have earned this month."

"That doesn't matter, who cares about money nowadays."

"But it does matter!" he would come back at me. "And I'll tell you why in just a minute." Smirnov would open up his notebook. "There you are; you three have

made 18,000 rubles, and the seven others, 26,400. Right? Now, we'll take the amount of ore. You here have seventy-three per cent, theirs is twenty-seven per cent. Right? Now a rough estimate of expenditure of materials. We add them up, divide, multiply. And what do we get? Here's what: your ore, the ore from these seven stopes, costs the state twelve-and-a-half times less. Twelve-and-a-half times! And you say money doesn't matter!"

"Yes, but those other crews still have to do a lot of preparatory work," I would say in an attempt to stick up for my mates.

"Nobody is reproaching them. But add that additional expenditure to your ore and yours still works out ten times cheaper.... So the result is in your favour, Illarion Pavlovich. The multi-drill method is a strong boost for the state budget...."

A group of women from the frontline area around Murmansk came to the mine to work as muckers.

"We haven't got over the fright those air raids gave us," one of them, Natalia Nenasheva, told us. "It's awful what's going on along the Kirov railway! The fascists—oh, how I hate them—are just raining bombs down on Murmansk and Kandalaksha. Just the same, I'd never have left if we hadn't been ordered to. After all, I was born there. And you can't help feeling ashamed to leave when the folks in the port there are all carrying on with their jobs in that hell of flames and explosions. You look through the smoke and fire and you see someone standing on duty at a sentry post or in the cab of a crane. And after the raid is over the sentry or the crane operator will crawl out from under the wreckage, shake the dust off himself, feel himself all over to see whether there are any bones broken, and get back to work again. We hated to have to be going away when we saw them, didn't we, Tatiana?"

Tatiana Fyodorovna, Nenasheva's friend, nodded in agreement.

"We certainly did. But why do you only talk about the horrors. Why don't you tell him the way the sky hums at night when our planes go out to get even with the Germans. It would be too bad if you folks here in the Urals were to get the idea that we were a poor, defenceless lot out there."

I saw that the women who had come all the way from the Arctic were doing their best to show that they weren't eating our Urals bread for nothing. I'd hear Natalia Nenasheva, for instance, say to the shift chief:

"Well, we're through.... What have you got for us to do now? No good wasting time. Shall we start in at another face?"

"Why, you've been working two hours overtime as it is," Smirnov would notice.

"Have we? If there's anything for us to do though, we'll stay on."

"How many cars have you loaded, Natalia?"

"Eighteen!"

"And you, Tatiana?"

"Eighteen."

"That's six more than your quota. Time you had a rest."

Khudzya Gumarov, a Urals Tatar and an elderly sedate miner, would stare at the northerners and start a conversation out of sheer curiosity.

"And what region would you be from?" he would ask.

"We're from Murmansk way."

"Oh sure, I know those parts."

After chatting with the women, Gumarov would turn to me and ask for the latest political news.

"What about those Allies? When's the second front coming?"

"No sign of it somehow...."

"Maybe you've been down the mine too long?"

"No," I'd reply, "there's no news of them up above either."

The new workers evacuated from the war zone joined us in sending a New Year's letter to Comrade Stalin. Among the evacuees were people from Estonia, from the Ukraine, from Karelia and from Leningrad. And when the letter was read out, all these people of different languages and customs joined in the applause at the final words:

"Forward for our Homeland, for Stalin, forward with Stalin for freedom, for victory, for our happiness!"

* * *

In April 1942, that grim period when everyone of us was ready to give everything for defence, when neither fame nor money mattered so long as the enemy was beaten back and defeated, when each one of us was ready to sacrifice life itself for the sake of victory—at that time the Council of People's Commissars of the U.S.S.R. awarded Stalin Prizes to designers, engineers, scientists, workers in art and literature, and Stakhanovite innovators.

Our stopes were as full of din and clatter as usual. Electric locomotives hauled strings of cars down the galleries with a grating noise, and the sound of blasting was heard from distant stopes.

I had just switched off the last of my six drills and turned to the blaster who was preparing the charge, when we saw an unusual number of lights shining through the clouds of dust.

"Visitors," said the blaster. "Quite a number of them, too. Chiefs, by the looks of it."

It was a sure sign, for a miner doesn't need more than a small lamp to find his way about down below, but the chiefs always carry bright lights to examine the workings properly.

"Yankin here?" I heard the voice of Mukhin, Secretary of the City Committee of the Party. I made out the figures of Aksenov, Novikov, Nesterov, the Secretary of the Party Bureau, and Ushakov, the assistant manager of the trust.

I called out to them and we exchanged greetings.

"Well, do you know why we've come?"

"Haven't any idea."

"Stop working and come up to the top."

"Why? What have I done?"

"Congratulations, man. You've been awarded a Stalin Prize...."

I couldn't believe it at first.

"It's impossible!"

My visitors shook hands with me and I saw they weren't joking.

A Stalin Prize! For me! A driller!

I was so dumbfounded at first that I didn't know what to do or say. Then I thought to myself: "Soviet people answer in deeds not words."

I said to the comrades:

"If you don't mind I'd like to finish my shift. I'll be up as soon as they cut off the compressed air." I turned to Olga Golovina. "Let's have some drills, quick! At the next face!"

The delegation went away after I had promised to be at the meeting at five o'clock. It wanted three hours to the end of the shift. As we hurried along to the next face I saw the visitors' lights twinkling far down the gallery. Their voices were no longer audible.

We change the drills and start one machine, then the second and third.... As usual, there is no talking among us, we have to use gestures because of the din.

The drills bore into the rock. Water squirts from some holes, powdered rock spurts from the others. An-

other battery of drills goes into operation. And soon the whole wall of rock is pitted with round holes—just like a machine-gun target!

Toward the end of the shift the blaster puts in the last charges. I wait for the explosion. At last it comes. Waves of dust and gas pour out of the stope. We wait until it clears.

"Measure it!"

"Sliced off a metre and a half," shouts Mikhail Smirnov. "Wait, Yankin, I'll figure your output for the shift. Mhm. Ten, eleven.... Nearly fifteen times the quota! Congratulations!"

* * *

The office on top was crowded. The miners had gathered for a meeting. I could hardly squeeze through the doorway. I was pushed forward to the presidium table which had been covered with a red cloth.

"Stop looking down at your feet," said Mukhin, taking me by the shoulder. "Come on over to the front."

Nesterov, the Secretary of the Party Bureau, opened the meeting. The first speaker was Nikolai Vasilievich Aksenov. He read the government decision and gave a brief outline of my work record.

Mikhail Grigorievich Kurzayev, section superintendent and my first teacher, took the floor. Then Lev Novikov spoke. Nesterov addressed the meeting. I listened to them and thought to myself: "You're praising Yankin, but Yankin wouldn't have been able to do anything without you. No, that prize doesn't belong to me, it belongs to the collective which made me what I am."

For was it not Nesterov, Aksenov, and Novikov who had taught me not to stop at any obstacle? Was it not they who had urged me to study and thus add tenfold to my strength? Was it not they who had brought me up?

I recalled the times when Aksenov, Kurzayev and Novikov had spent nearly twenty-four hours a day in the mine. I remembered the meetings of the Party Bureau which Nesterov had invited me, a non-Party miner, to attend so as to find out what help I needed. The Party secretary and the chief engineer had found time to provide instructors in geology and mathematics for me, to see that my little girl was properly dressed, and that the drills, lamps, hoses, etc., were in the proper condition.

When my turn came to speak I said:

"Comrades miners! Eight years ago I started work in this mine as a mucker. And now this high and treasured award has been conferred on me.... Even in the stern days of war our Government and Comrade Stalin are not forgetting us. It is hard to find words to express the joy I feel today. I thought that Stalin Prizes could only be merited by learned men and not by ordinary workers. But in the Soviet country we, workers, are valued as highly as scientists. My response to this reward will be to produce more than ever before. Each one of us, comrades miners, can be a prize winner.... It is up to us.... Long live our Government!"

The miners responded with loud cheers.

"Long live the Lenin-Stalin Party!" I shouted. "Long live the great army leader, our beloved Comrade Stalin!"

And again a mighty cheer shook the rafters, in honour of the Party, in honour of our leader, in honour of our beloved Homeland, in honour of the glorious Soviet hero-nation!

The joyous excitement of that occasion lasted for many days to come, for greetings and congratulations poured in from friends by telephone, telegraph and mail. The People's Commissar wired: "Hearty congratulations on award of Stalin Prize for putting into practice the

multi-face and multi-drill method.... I wish you further success in your work....” Then came a wire from Academician V. L. Komarov, President of the Academy of Sciences: “Am happy to congratulate you on the high award of a Stalin Prize. I have no doubt that this well-merited reward will serve as a mighty stimulus for further victories on the labour front.” Telegrams came from the editors of newspapers, from engineers in Moscow and Sverdlovsk, from Party workers, Stakhanovites....

Along with the last batch of congratulatory letters came a draft on the State Bank.

I sent a note to Mukhin, Secretary of the City Committee of the Party. “Please accept 50,000 rubles for the Red Army Fund,” I wrote, and turned the money over to the bank.

* * *

In the huge hall of the Sverdlovsk Industrial Institute, where a large group of Stalin Prize winners were to be presented with their certificates, I met Alexei Semivolos, who was working in the Urals at the time, and Dmitri Bosy, the famous Stakhanovite milling-machine operator from Tagil. Grey-bearded scientists, designers, physicians—representatives of the intelligentsia—were gathered in the hall. And among them were we, ordinary workers whom the state and the Party had elevated to the summits of scientific achievement. We rank with scientists! Communist labour erases the distinction between physical and mental work. Was it not remarkable that Academician Komarov should be greeting an ordinary miner as a colleague!

Deep mines have what are called raises—steep passages driven upward from a drift to tap strata of ore lying above. Sitting there in the hall and mentally reviewing the past years of my life, I visualized myself

climbing up the rocky side of a "raise" of my own carved out in the course of years to reach higher and higher levels....

My heart beat fast as I took the laureate's certificate. Then the three of us, Semivolos, Bosy and I, sat down in a corner, our arms around one another's shoulders, and gazed for a long time at the signature of Joseph Vissarionovich Stalin inscribed with a fine-pointed pen.

His handwriting....

* * *

All this time I had been a non-Party man. It had always seemed to me that I didn't measure up to the standards required of a Communist.

Nesterov had never spoken to me on the subject. My numerous talks with him and the members of the Party Bureau had concerned various production matters connected with the practical application of the multi-drill method. I had attended meetings of the Bureau and open Party meetings and had often spoken at these gatherings, making proposals and registering criticism. The multi-drill method was no longer my own personal proposal, it concerned the whole collective now and especially the Party organization of the mine which devoted a great deal of time and energy to it.

It was taken for granted that all new problems arising at the mine were discussed by the Party organization. The Party organization called to order some stubborn mining executives, it discussed in detail the results of the work of the various sections, and gave its support to all bold undertakings. This had not been the case always, however, but only since Nesterov became secretary. His predecessor, a man lacking an inquiring mind and inclined to laziness, was removed from the secretaryship for his conservatism and incompetence; interfering as

he did with the Party organization's guiding itself by the new, he could not remain at its head. As for the majority of the Communists at the Krasnogvardeiskaya mine, they were people with initiative and creative courage. We non-Party miners were keenly aware of this.

With each passing day I became more and more aware that I too was doing Party work in some measure by popularizing the new drilling method. The leaders of the Party organization had evidently seen that all along. That explains why the people from the City and Regional committees of the Party talked to me more and more frequently, and although so far the talks concerned production matters only, they treated me as a person who bore a certain responsibility.

From the beginning of the war my contact with the Party organization became still closer. I took Mukhin's invitations to "drop in" to the City Committee as a sign that I had serious Party duties to perform. That is how I regarded each of my visits to the City Committee.

Early in 1942 I began asking myself: "Can you consider yourself a non-Party man?" It was about this time that Nesterov finally spoke to me about it.

"I'm ready to give you a recommendation for Party membership," was all he said.

It became clear to me that the Communists at the mine had studied me rather thoroughly over a lengthy period of time before Nesterov made his offer. The secretary of the Regional Committee too once referred to this in passing during a conversation I had with him.

"Don't think that we don't know you," he said. "We probably know you better than you do yourself—your past, and your present, and even your—future."

I handed in my application.

When the day came for my application to be taken up I was terribly nervous. At the meeting I began to tell a long story of my life,

when I heard voices saying: "That's all right. We know all about it!"

I was accepted unanimously.

Now I was in the Party, now my life was merged forever with the life of our glorious Communist Party.

That is how I became a Communist.

* * *

The train pulled in at Turkestan station. I stepped down onto the burning concrete of the platform. What heat! The breeze merely stirred the waves of scorching air. Flat country, shimmering in the heat of a blazing sun, stretched out in all directions.

I was bound for the Achisai mine. With me were two high-speed tunnellers from the Novo-Levinsk mine in Krasnouralsk—Melnikov and Klyuzhin.

The Achisai miners knew that we were coming and had prepared to meet us.

We arrived the same evening. Next morning we went down the mine. We toured the stopes and talked with the drillers and several times I picked up a drill and operated it for a while to get the feel of the ore. The drillers were good-natured smiling Kazakhs, most of them elderly men who in the old days would have been scared out of their wits by even the distant sound of a pneumatic drill. Now they handled the machine with accustomed ease, regarding it as the only possible tool for mining ore. Nevertheless they watched with interest when I got to work and set the drill going at top speed. They liked that.

"Oh, good Stakhan, good Stakhan!" they exclaimed, shortening the word to fit their own language

"More, Stakhan, more!"

The Secretary of the District Committee of the Party suggested that the next day I should give a demonstration of my method.

"We'll get the drillers together and let them see how it's done. Agreed?"

"Agreed."

The next day they prepared 28 faces for me. Unfortunately, however, you coudn't use more than one drill at a time here because the ore was too soft for the drills to work automatically.

I had to take some time off work to explain things, but just the same I drilled the 28 faces in one shift, and 33 linear metres of ore was brought down by blasting, an unheard-of quantity for this mine.

And there was still time left before the shift ended.

Besides the Secretary of the District Committee, the Secretary of the Central Committee of the Kazakhstan Communist Party (Bolsheviks), and the Secretary of the South Kazakhstan Regional Committee of the Party were present. They called over the mine director.

"Aren't there any more faces to be drilled?"

"There are."

They took me to a face.

"We need 18 holes here, 1.8 metres in depth each."

I drilled for 16 minutes and then switched off the machine.

"Finished?"

"Finished. Any more to be done? There's still time for a couple."

The mine chief, with an anxious look in the direction of the Party leaders, had to admit that they hadn't prepared any more faces.

The visitors shook their heads in reproach.

When I came out of the mine I discovered that my canvas jacket was soaked through with perspiration. A group of old Kazakhs sitting cross-legged in the yard called me over.

"Sit down, Stakhan, and have a smoke. Good idea

yours." And an old man gave a vivid take-off of me running from face to face. "Good idea you thought up," and he tapped his forehead.

"No," I said, "it wasn't I who thought it up. It was a miner called Alexei Semivolos. I went to him in the Ukrainian Republic and he showed me, and now I've come to the Kazakh Republic to show you...."

"Oh, *jakhsy*! Good!"

And every day I gave them a lesson. My comrades Melnikov and Klyuzhin, doing together the work of nine men, were demonstrating high-speed driving of new workings, completing three cycles a day. Gradually the local crews learned to keep the same pace.

At the eighth level I showed the Kazakhs how to do high-speed drilling. They had always worked three at a face.

"Why three?" I asked them. "Watch me doing it alone. Only you have to use a drill retainer."

And I picked up the drill.

"See? This is the way."

But the Kazakhs were still afraid to try drilling singly. A few days later I came down to the same level and found them working in threes again.

"How goes it?"

"*Jaman*! Bad! Are you going to drill?"

"I am."

And again I picked up the drill. I took out my watch.

"Now time me, comrades!"

I drilled the whole face in half a shift, stopping to explain in between.

The next day I came down the mine, they were working singly!

"How goes it?"

"*Jakhsy*! Very good!"

That was how we helped our Kazakh comrades to nearly double the output of ore.

Several months later I read in the newspapers that the Achisai mine had won the State Committee of Defence banner.

* * *

From Achisai we went to Kirghizia with the same assignment.

At a Kirghiz mine we were to demonstrate the efficiency of our drills which for some reason the local mechanics objected to. Under pressure from his chief mechanic, the director of the local mines had asked the Government and the Central Committee of the Communist Party of the Kirghiz Republic to arrange for the manufacture of new types of drills at big plants in the vicinity.

The first thing we heard when we arrived there were complaints about the drills.

"They're no good! You see the chuck gets overheated and there's nothing you can do about it. It's too bad!" The director who told us this was obviously repeating what someone had told him.

We examined the drills carefully.

"Here's where the trouble lies, comrades," I said. "Your chucks get overheated because you haven't adjusted the piston so as to reduce the number of revolutions and increase the force of the impact on the drill."

The director smiled.

"Are you a designer?"

"No, I'm a driller. But I've worked with these machines long enough to know them well. I can prove it to you."

I took the drill apart on the spot and adjusted the piston.

"May I go down to a drift?"

We went down. I started to drill. The machine worked perfectly.

The director had to admit that his mechanic

had misled him. "It wouldn't do directors any harm to know their machines themselves!" I thought to myself.

The following day I drilled six faces with the "unusable" drill and fulfilled the quota by 1,800 per cent, after which the director in my presence gave his mechanic a dressing down lasting two hours. He banged his fist on the table and shouted:

"You had fifteen years of schooling, didn't you? Fifteen years! How the devil anyone can be so abysmally ignorant after all that study is beyond me!"

* * *

The year 1942, a particularly eventful year for me, was drawing to a close. It had meant difficult trials for me, but it had also brought me much happiness. In 1942 I became a member of the Communist Party. In 1942 I was awarded the Order of Lenin. In 1942 I received a Stalin Prize.

I was now drilling thirty faces a shift. And still I felt I had not paid the debt I owed to the people, the Party, the Government.

I wanted to move mountains!

And just at this time a miserable sliver of ore flew into the pupil of my eye and put me out of the running.

For three days and nights the local physicians worked over me without being able to remove the foreign body that had lodged itself in my eye. Finally after the fourth painful, sleepless night they extracted it. But I could not work: 75 per cent of my eyesight was gone.

The People's Commissar ordered me to go to Moscow at once.

There I was taken to a famous oculist. He sat me down, unbandaged my eye and examined it.

"Yes, vision 25 per cent. How old are you?"

"Thirty-two."

"Still young. You'll be all right soon."

The professor's assistants applied some lotion and ointment and bandaged up the eye again.

"The dressing will last for three days. Try to stay indoors as much as possible. Don't read much. The theatre? Yes, I think so, so long as you don't strain your good eye. You like the Pyatnitsky Choir? Very good, excellent! A feast for the ears rather than the eyes, eh? Very good, come back in three days."

I came back in three days. They unbandaged my eye.

"Don't open it."

More lotion, more ointment and another dressing.

"Now keep that on for two more days."

I came back after two days. They removed the bandage.

"Now let's see. Open your eye. Well, how is it? As good as the other?"

It was. The crust that had formed on the wound had disappeared as if by magic.

"Well, good luck. Take this along with you as a souvenir. It might come in handy." And he handed me some medicine.

* * *

It was still winter when we were on our way by train to Jezkazgan. The train made frequent stops. The lashing wind drove flurries of snow across the steppe. Finally we arrived. From the station there was still a 25-kilometre drive to my destination, and against the blizzard too. The gaunt nag hitched to the sleigh was in no hurry, and no amount of shouting and cursing on the part of the driver could make it step up the pace.

My teeth were chattering with cold by the time I got to the home of Kharlamov, the chief engineer of the mine.

"Gracious, the man's half frozen!" cried Kharlamov's wife. "Have a cup of hot tea.... Or perhaps a glass of vodka would be better!"

"That's more like it!"

"Drink it down to warm up and tell us how things are up your way. How long can you stay here?" Kharlamov asked.

"As long as you want to have me...."

Soon I was down the mine again. Jezkazgan ores are akin to Urals ore. They are just as hard. It is possible to use sets of stopers here on as big a scale as in the Krasnogvardeiskaya mine.

This established, we started in at once, using pneumatic supports which increase the productivity of the machine several times over. There were plenty of skilled workers at Jezkazgan capable of introducing the new technique.

I celebrated New Year 1943 in Jezkazgan and by that time many of the local miners besides myself were able to report to the country scores of faces bored and many tons of ore produced above plan. Very soon this mine also won the challenge banner.

My long-distance travels were over.

But the short trips continued. In 1943 I visited the Tagil mines twelve times.

By the November holidays in 1943, when our troops had crossed the Dnieper, I turned out 21 carloads of copper ore over and above plan, and by May 15, 1944, just before the great summer offensive began, I completed my sixteenth annual output quota since the beginning of the war.

The multi-drill method had justified itself.

When we read about massed fire in war communiques we used to say: "Drilling sets of faces with sets of drills is the miners' massed fire."

When we read about artillery offensives in dispatches from the front we used to say: "Drilling sets of faces with sets of drills is something like an artillery offensive."

* * *

On May 15, 1944, I was appointed section superintendent at the Krasnogvardeiskaya mine.

"Think you can do it, Comrade Yankin?" Valentin Nikanorovich Bogatov, the manager of the trust, asked me.

"I think so, provided I have no assistant," I replied.

Ten years of work in the mine had given me plenty of opportunity, if not to study, at least to observe the work of the so-called "supervisors"—the section superintendents, shift technicians and others with whom the miner comes into contact. I have seen many chiefs in my time—good ones and poor ones. Some were stern and strict, too strict perhaps, but nevertheless just, efficient and hardworking. Some were soft-spoken, sugary and insincere—they'd say one thing to your face and another behind your back. There were some chiefs who were just lazy, but those didn't last long. They were either sent to work on the surface or dismissed. But among the technical personnel I have also seen people whose uselessness is not quite so obvious—I refer to some assistants who have no definite responsibilities. The assistant to the section superintendent is one of those. He is a superfluous figure. That is why I refused an assistant.

Bogatov agreed to my suggestion. He was never one to stop at breaking with accustomed routine if a proposition was interesting. And the idea of doing away with the post of assistant on the sections appealed to him greatly.

"Are you sure assistants aren't needed?"

"Certain. I can prove it."

"Of course," he said, "that is exactly the line we must follow. Go ahead and try it out, Yankin."

Before I was put in charge of the section the assistant there was Zhulanov. He was a clever and experienced man, but evidently he had been an assistant too long to be capable of making a decision himself. The result was that the crew foreman had to take up every question twice; first with the assistant "to sound the ground," and then with the chief who did the actual deciding. Besides, Zhulanov's immediate superior had been a bungler and a rattlebrain. No wonder the section was fulfilling its plan by no more than fifty per cent. The only reason that section had been able to get away with it for so long was because the other sections were turning out so much that they more than covered its shortages.

I knew that I was now wholly responsible for the section but I was not afraid of the responsibility in spite of the fact that it was a pretty big section with a great many workings, a good quantity of machinery and, what is most important, a large number of workers.

A month later, when our section won the challenge banner, Nikolai Vasilievich Aksenov said:

"I never thought that two people could do so much good by their absence!"

A worker likes his chief to be explicit and firm above all. I remember Lev Novikov, a strong-willed, resolute technician and administrator. If you came to him with a proposition that did not concern your own section only, he would never tell you: "That's not my business, let the mine director decide." A useless suggestion he would turn down on the spot, but give him a good one and he'd pounce on it at once and you could count on him to back you up to the end. He'd go to the mine director about it, take the matter all the way up to the trust and the Party Committee, and elsewhere too, if need be.

That is the sort of section chief I wanted to be. I made a point of visiting nearly every worker during the shift

and in that way I was prepared for any emergency that might crop up.

It was always an easy matter to check up on things brought to your attention by a worker. If a worker said it was time the ladder was repaired, you knew he was right because you'd noticed it yourself and so you'd send someone over at once to fix it. If he assured you they could do without timbering in some working, you could tell him he was mistaken because you'd seen yourself that the ceiling needed propping. He'd tell you the pump the machine shop sent down was no good, and again you'd know he was right because you'd seen that the pump wasn't working properly yesterday, and you ordered a mechanic sent down right away....

I still can't understand how it is that some managers "suddenly" wake up to the fact that some department or another has wasted a half a million rubles' worth of materials in a month. After all, it's his business to keep an eye on the use of materials every day.

At workers' meetings I had seen some miner or other get up to complain about something, talking excitedly and waving his hands. The audience would obviously be in sympathy with him. Then some member of the management would get up from behind the presidium table and ask in surprise:

"Whom did you take this up with? Why didn't you come to me about it? You didn't even approach me on the matter, did you...."

Of course it is necessary to take things up with the management, to knock at office doors and show persistence. But whenever I listened to such exchanges I couldn't help thinking to myself: "What about yourself, esteemed manager? Where were you? If the men don't come to you, you've got to go to them. Find out for yourself. Ask questions. Get to the bottom of it yourself."

As section superintendent I had under me not only

workers, who had been my crew mates yesterday, but also engineers and technicians, who had been my superiors. How was I to behave toward them? And how would they behave toward me?

These problems solved themselves. Driller Ivashchenko, with whom I had worked on an equal footing for a long time, came to me and I could see that he was not in the least put out by our new relationship.

"Illarion Pavlovich, here's what we ought to do.... I suggest this...."

"Very good, Andrei Ivanovich, I'll take it up with the mechanic. When do you want to start in on this? Tomorrow? Couldn't you do it today?"

"Today? All right. I guess it can be managed today if we try hard enough."

And that is how it was with Gumarov, Vesyolykh and Rakhmatullin. There didn't seem to be any need for official orders and instructions.

One of the engineers, however, did try the old formal approach.

"What are your instructions about the manholes?"

"What have you decided yourself? What do you propose?"

"I'm not in command here, Illarion Pavlovich. You are the section chief, it is for you to give the orders and for us to carry them out...."

At that point I would blow up and the man would go off to complain about me:

"Think of it, an ordinary practical worker and he dares to raise his voice...."

Fyodor Semyonovich Borzykh was a technician of an entirely different order. He was a first-rate manager, a good specialist of the Soviet school.

I cannot remember Borzykh ever taking up any matter with the management without first submitting his own proposal. I cannot remember him ever holding himself

aloof from any serious technical dispute. And there was never any need for me to issue him orders. We understood each other perfectly and a short talk on any matter was enough for the correct decisions to be taken.

No serious-minded worker with any initiative ever needs to be formally ordered to do anything.

I have read about old-time Russian engineers. The history of the Urals abounds particularly with names of mining specialists. But who were these people? Some were obedient servants who carried out their masters' will without a murmur, others were dreamers and enthusiasts who came to grief against the solid wall of tsarist bureaucracy, still others, also dreamers and enthusiasts, lived in despair and died before their time in poverty.

Engineers who merely took orders got on better in old Russia, found it easier to make a career.

In Soviet society that type of engineer is a nobody. A specialist who only asks "What are your orders?" instead of thinking himself, taking action, showing initiative, is a "specialist" in name only and capable merely of evoking pity.

In our time it is not enough for an engineer to solve technical problems properly. He must take a proprietary attitude to the problem at hand, which means that besides working out the formulas and making the drawings, he must calculate the amount of nails and timber, metal and electricity needed, make sure that the result will not cost the state too much, see whether he couldn't get along with less expenses, fewer workers. And if his first formula does not meet these requirements, he must scrap it and work out another one.

The engineer in the olden days did not go out of his way to save money for his boss, even though that was expected of him. Our engineer and our worker are masters themselves. True, we have senior and junior managers. But my mine is just as dear to me as it is to my Minister.

He and I love our Soviet country equally and socialist property is equally precious to both of us.

A section chief must know something of economics not only because he has to count his nails and boards. From the very beginning I didn't want the workers to have to go to the accounting office every time some slip occurred in the pay roll or in a work assignment. Formerly it happened that the section chief would send the worker up to straighten out such matters himself.

"Better see the bookkeepers about it. I haven't the slightest idea...."

Yes, the section chief has to attend to such matters as well. And he ought not to wait until the worker lodges a complaint. He must see to it himself that the work done is recorded and valued correctly. And if a mistake occurs it is his business to call the office personnel to order. Let the worker go on with his job calmly, confident that his interests are being taken care of.

In a talk at the Party Bureau about raising the prestige of the section chief, Nesterov told me:

"The position alone doesn't give a man authority. That has to be won. How? By personal example of integrity and industry. By weighing carefully every word you say."

Sometime later when I was put in charge of a level we were discussing the behaviour of Comrade M., a section superintendent, at a meeting of the Party Bureau. M. had a weakness for shouting and raising a fuss when something went wrong. And the men had grown so accustomed to his shouting that his word no longer had any weight with them. "He'll shout himself hoarse and calm down," the workers would say. "He likes to do a bit of yelling now and again." Nobody was afraid of the chief's rages because it was generally known that Comrade M. would "calm down" in half an hour.

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things were well in the section and the superintendent went about boast-

ing, praising everyone and promising rich rewards, and to me as chief of the level he reported incredible achievements and fantastic undertakings.

When the Communists at the Party Bureau meeting told him he ought to have respect for his own word, he claimed that someone was "letting him down" by not supplying him with the materials and tools he needed. But I pulled out my little book and showed the Party Bureau that it was not so.

"Here are the figures. So many tools, so much materials. The same as for all the other sections! You're just trying to throw dust into our eyes!"

The Bureau decided to reprimand M. and, it must be admitted, that reprimand did him good. He took himself in hand after that.

"Our chief has quieted down a bit," the workers joked, and from the way they spoke it was clear that if M. continued to improve, his workers would respect him as they respected the other engineers and technicians, not merely for their title, but for being good organizers as well.

At this particular period the section superintendent had his hands full. I had to think not only about the tons of ore, about drills, hoses and trams. There was the matter of boots for the new workers, food coupons, potatoes, soap, firewood for workers' dormitories....

And I reflected that even if I became a real engineer, higher mathematics alone wouldn't be enough to do all that the state had entrusted to me.

The organizational role of a Soviet engineer is broader than his technical functions. His rights are many, but his duties are even more numerous, and his initiative must cover a wider field than his direct duties call for.

My brief engineering experience convinced me of this.

I was now about to go to Sverdlovsk to enter the Mining Institute. My studies in general subjects, which had

been resumed after my travels ended, had been proceeding successfully. I had mastered algebra, geometry and trigonometry. Now I was working hard on my Russian grammar.

The country was celebrating its epoch-making victory. Urals men were coming home from the front. The mine gave a rousing, lavish, real Urals welcome to the miners who returned from the war.

Had I the right in these glad days of peace to leave the mine to "scale the steep summits of learning"?

"Of course you must go!" Aksenov urged.

"By all means!" approved Nesterov.

"I wish you success!" was Bogatov's farewell remark.

"I'd go with you if I were a bit younger," said the veteran miner and old Bolshevik Mikhail Alexeyevich Senyurin.

I felt I had the moral right to go and study because my section had fulfilled its eight-month program in six months, and later on, when I had become chief of a whole level, I had succeeded in combining four sections into one, releasing six of the engineering and technical personnel and sixteen drillers, reorganizing the work and raising output substantially.

So I could be an engineer after all!

* * *

My student years began. Anyone who has started studying late in life will appreciate how difficult it was for me to catch up, to adapt myself to the regime of a school. And especially with such tremendous gaps in my education!

Six to eight hours at the institute and then all evening until the wee hours of the morning poring over drawings, books and notes in my tiny room in the students' dormitory until I would drop into bed in utter weariness.

But my studies progressed. I passed my examinations according to schedule.

Many were the evenings I had spent before this studying the *History of the Party*. Now, listening to lectures on the foundations of Marxism-Leninism, I took up Stalin's *History of the Communist Party of the Soviet Union (Bolsheviks), Short Course*, again and found that it gave me a new, broader and clearer insight into the experience of the Party and a gigantic historical perspective. This book helped me to understand my own life, to realize whence the Party draws its strength and why its cause is invincible.

I learned Stalin's precept thoroughly:

"That in life which is born and which grows day after day is invincible, its progress cannot be checked."

In these pointed words lies the explanation why the Stakhanov movement arose and why it developed; why the collective farms are prospering; why we won the war and why we were bound to win it. . . .

Mathematics and theoretical mechanics came easier to me than chemistry, which I did not care for much at first. But that was only because I didn't know it well enough. I soon discovered what a thrilling science it is. What a great man our Mendeleyev was to have opened mankind's eyes to the world's riches!

Stirring vistas of knowledge to which I had slowly groped my way before were opened to me by the lectures in mining engineering. What I had formerly pictured as the mysterious pranks of nature was revealed to me in the geology lectures as the operation of natural laws. That very same ore, thousands of tons of which had passed through my hands, showed up in a new light thanks to the lectures on ore concentration.

So that's what that ore of ours contained! How many brains had worked on the problem of extracting from a single chunk of grey stone pure copper, pure gold, pure



Illarion Yankin, now a student at the Sverdlovsk Mining Institute, takes an examination in geology

cobalt and pure sulphur.... How many processes this chunk had to go through—screening, crushing, milling—before the flotation process finally separated the metal....

* * *

I took the practical part of the course at home in the Krasnogvardeiskaya mine.

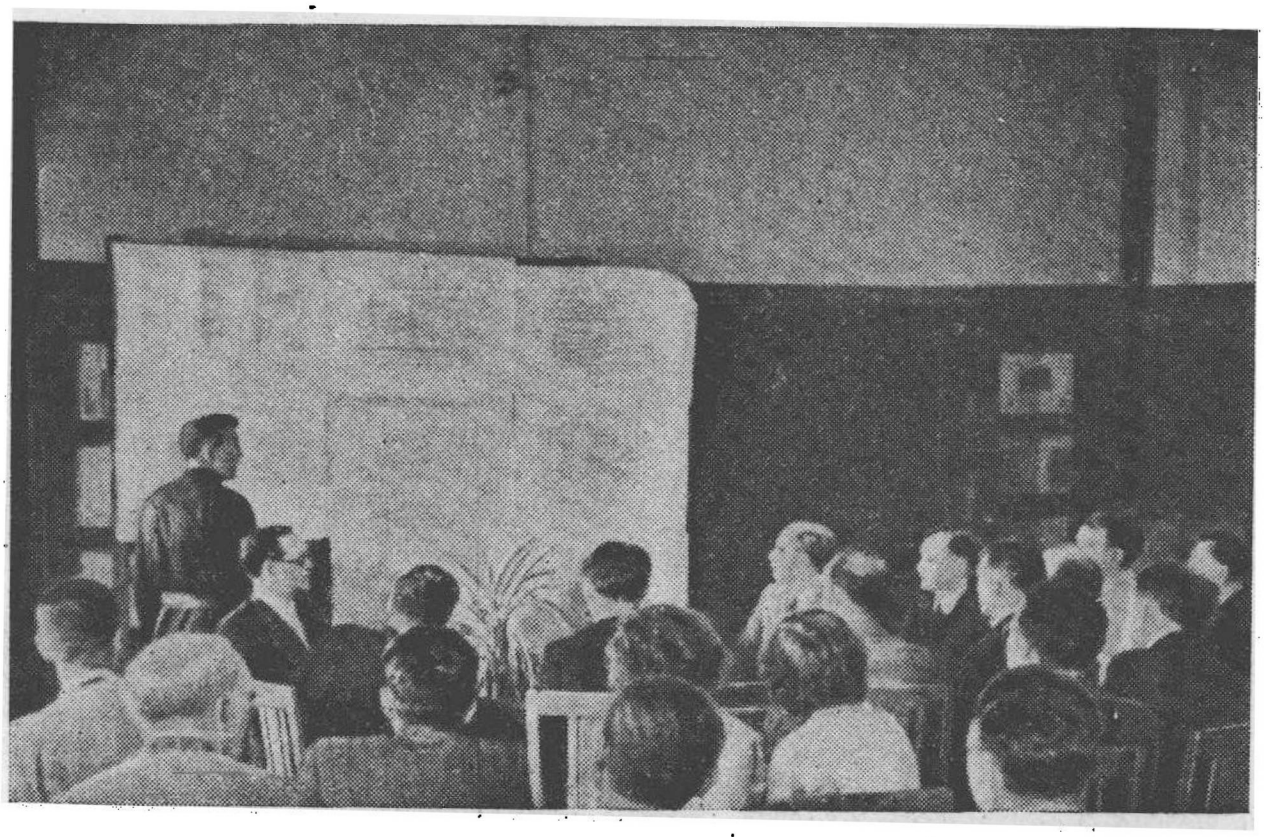
Ushakov, who had once taken charge of my studies, was delighted to see me. "Well, how goes it, student? Hard, eh?"

"Hard it is."

"You didn't think it would be easy, did you?"

"No."

"Then you're not going to back out?"



Illarion Yankin defends his diploma thesis at the Sverdlovsk Mining Institute

"No fear!"

It was just like old times. I operated the drill and had long talks with the miners. Old Gumarov remarked with a wink:

"What's it like to be getting a higher education, a bit stiffer than this here?" he nodded toward the drill.

"You sweat as much, if not more. . . ."

For the first time I tried to make a few plans of workings on my own. I had learned to read drawings long before, but I had not yet acquired the knack of drawing myself, and our engineers willingly helped me.

* * *

I am on my way to the institute with my diploma work under my arm: eight sheets of drawings and a whole book—227 pages!—of "explanatory notes." The theme of my diploma project is "The Further Development of the



Illarion Yankin, now a graduate mining engineer and Stalin Prize winner, at work at home

Copper-Pyrite Deposits in the Field of Krasnogvardeiskaya Mine, Beginning with the 304-Metre Level."

How I toiled over that project! The formulas and calculations were not so bad; it was drawing all the minute details of the graphic design that gave me the most trouble. My hand was not yet accustomed to such a delicate instrument as a fine-pointed drawing pencil and I had had to erase a hundred times before the lines, angles and curves were perfect.

There was a special section, of course, devoted to a theme born of years of hard work at the face: "Multiple Drilling in Ore Extraction," it was entitled.

I should like to enumerate the subtitles listed in the

contents table to give the reader an idea of the range I had to cover in compiling this project which strictly speaking was simple enough. Here they are: General Data, Geology of the Deposit, Annual Productivity of the Mine, Baring the Ore-Bed, Shaft Sinking, Workings Adjoining the Shaft, Systems of Working, Underground Transport, Hoist, Drainage, Compressor Installation, Electric Power Supply, Surface Installations, Safety Measures, Fire Prevention, Economic Aspect, Bibliography.

It goes without saying that each chapter was provided with plans, calculations and formulas.

I endeavoured to invest in my diploma project not only all the knowledge acquired in the institute, but also all my working experience as well, the experience of a Stakhanovite, for it was that, after all, that brought me to an institution of higher learning. The members of the examining board considered that an advantage over the projects submitted by students who had not had so much practical experience as myself.

And now after so many sleepless nights I am bound for the Institute with this precious burden. Yevgeni Yakovlevich Kurganov, my instructor, is even more nervous than I.

The professors take their places. The board of examiners is headed by Professor Charkviani from the Urals Branch of the Academy of Sciences. There are 18 members on the board.

I hang up my drawings and proceed to explain my idea, demonstrating my calculations on the blackboard. I answer questions. There are a great many questions. I barely have time to answer them all.

Everything is going well. What will be the result?

The look on the professors' faces reassures me.

The board withdraws to confer. And finally the "verdict" is announced.

"Excellent!"



Illarion Yankin, director of the Pyshma Ore Mine Administration, in his office

One of the opinions ends like this:

"On the whole the project makes a very good impression, as regards both the substance of the problems treated and the form of exposition, and fully merits to be rated as excellent."

* * *

Soon afterward I was appointed director of the Pyshma ore mine administration. Before me lies a new and interesting field of work as a Soviet mining executive. Behind me lies my working life, the life of an ordinary Soviet workingman and Stakhanovite, a life which has confirmed over and over again the truth of Stalin's memorable words about the Stakhanov movement:

"Is it not clear that the Stakhanovites are innovators in our industry, that the Stakhanov movement represents the future of our industry, that it contains the seed of

the future rise in the cultural and technical level of the working class, that it opens to us the path by which alone can be achieved those high indices of productivity of labour which are essential for the transition from Socialism to Communism and for the elimination of the distinction between mental labour and manual labour?"

The miner has become an engineer. But I still have a warm feeling in my heart for the drill. After all, it was labour, the labour of the miner, which requires a creative approach and initiative, that brought me and my comrades to the summits of learning and made engineers of us. That is a law of our Soviet life.

* * *

...Life goes on. Time flies. My Valentina is now a second-year student at the Mining Institute. My little Seryozhka already stands firmly on his sturdy little legs, a happy citizen of the communist society, the son of Engineer Yankin....